UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/457,999	12/10/1999	UWE HUEBLER	P99.2413	8312

7590 12/02/2002

SCHIFF, HARDIN & WAITE
PATENT DEPARTMENT
7100 SEARS TOWER
CHICAGO, IL 60606-6473

EXAMINER
CHARLES, DEBRA F

ART UNIT	PAPER NUMBER
3629	

DATE MAILED: 12/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/457,999	HUEBLER ET AL.	
	Examiner	Art Unit	
	Debra F. Charles	3629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 September 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claims 1-27 have been reviewed.

DETAILED ACTION

Response to Amendment

1. Amendments to claims 1 and 8 have been entered.

Response to Arguments

2. Applicant's arguments filed 13 September 2002 have been fully considered but they are not persuasive in light of new grounds for rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 3, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al. (US 5230391 A) and Manduley et al. (US 3890492 A).

As per claim 1(Twice amended), Murata et al. disclose a method for controlling a dynamic scale(Murata et al., Abstract) for processing mixed postal items having respectively different formats(Manduley et al., Abstract),

said dynamic scale(Murata et al., Abstract) having a motor-driven conveyor for moving a postal item,

in a dynamic operating mode(Murata et al., Abstract), in succession with continuous movement through an entry region of the scale, a weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67,Col. 7, Lines 50-67), and a discharge region of the scale(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 6, Lines 1-15), said method comprising the steps of:

in said dynamic operating mode(Murata et al., Abstract), supplying a piece of mail to said entry region of the scale at a predetermined regulated conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20) which is independent of the format of the piece of mail, and conveying said piece of mail through said entry region of the scale to said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67);

deactivating regulation of the conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20) during a measuring time range while said postal item is conveyed without a stoppage through said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67) and obtaining a weight measurement of said postal item, thereby allowing said weight measurement to be obtained with said postal item moving at a speed other than said predetermined regulated conveying speed; and

after said measuring time span, re-activating regulation of the conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20) and moving said postal item at said predetermined regulated conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20) from said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67) through said discharge region of said scale(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 6, Lines 1-30).

Murata et al. fail to disclose entry region of the scale, a weighing pan, and a discharge region of the scale.

Manduley et al. disclose entry region of the scale, a weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67), and a discharge region of the scale(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 6, Lines 1-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use entry region of the scale, a weighing pan, and a discharge region of the scale as taught by Manduley et al. to get the benefit of an appropriate location to receive, weight and discharge the article to be weighed.

As per claim 1, official notice is taken that on-the-fly weighing incorporating weight measurement obtained with said postal item moving at a speed other than

said predetermined regulated conveying speed are an old and well-known types of technology in the postal scale and weighing instrument art. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement Murata et al.'s weigher-conveyor system to include speed control features to get the benefit of conveyor speed control to ensure high weighing accuracy given that Murata et al.'s invention does indicate the conveyor stops and starts, and this is a form of conveyor speed control.

As per claim 2, Murata et al. disclose a method as claimed in claim 1 comprising, in said dynamic operating mode, the steps of:

maintaining said conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20) at said predetermined, regulating conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20) before a beginning of said measuring time span;

sensing when said postal item is located in said entry region of the scale(Murata et al., Abstract, Col. 3, Lines 15-67); and

upon sensing that said postal item has exited said entry region of the scale, supplying unregulated voltage pulses to the motor driving said conveyor during said measuring time span to operate said conveyor with a predetermined power without regulation of said conveying speed, and tensioning said conveyor to reduce said conveying speed of said postal item during said measuring time span dependent on a weight of said postal item(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20,Col. 3, Lines 15-67).

As per claim 3, Murata et al. disclose a method as claimed in claim 1 wherein said dynamic scale(Murata et al., Abstract) is used with a further processing station having a further processing station conveying speed, and regulating said conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20, Col. 3, Lines 15-67)

in said dynamic scale(Murata et al., Abstract) dependent on said further processing station conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20, Col. 3, Lines 15-67) to produce an output of postal items from said dynamic scale(Murata et al., Abstract) which is approximately 66% of an output of postal items from said further processing station.

As per claim 4, Murata et al. disclose a method as claimed in claim 1 comprising the steps of:

evaluating said weight measurement of said postal item in said dynamic operating mode(Murata et al., Abstract, Col. 2, Lines 60-67, Col. 3, Lines 1-67); and

dependent on the evaluation of said weight measurement, directly transporting said postal item through said discharge region of said scale or switching into a further operating mode and statically weighing said postal item(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20, Col. 3, Lines 15-67) on said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67) in said further operating mode.

Murata et al. fail to disclose weighing pan.

Manduley et al. disclose weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use weighing pan as taught by Manduley et al. to get the benefit of an appropriate location to receive, weight and discharge the article to be weighed.

As per claim 6, Murata et al. disclose method as claimed in claim 4 comprising, in said further operating mode, conveying said postal item at a constant conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20, Col. 3, Lines 15-67) through said discharge region of said scale.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al. and Manduley et al. as applied to claim 4 above, and further in view of Freeman et al. (US 4956782 A).

As per claim 5, Murata et al. disclose a method as claimed in claim 4.

Murata et al. fail to disclose reversing a conveying direction of said conveyor for statically weighing said postal item; and subsequently again reversing the conveying speed of said conveyor after statically weighing said postal item to convey said postal item through said discharge region of said scale(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20 Col. 7, Lines 50-67).

Freeman et al. disclose reversing a conveying direction of said conveyor for statically weighing said postal item(Freeman et al., Abstract, Col. 6, Lines 40-65); and subsequently again reversing the conveying speed (Freeman et al., Abstract, Col. 6, Lines 40-65)of said conveyor after statically weighing said postal item to convey said postal item through said discharge region of said scale(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20 Col. 7, Lines 50-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use reversing a conveying direction of said conveyor for statically weighing said postal item; and subsequently again reversing the conveying speed of said

conveyor after statically weighing said postal item to convey said postal item through said discharge region of said scale as taught by Freeman et al. to get the benefit of moving the weighing conveyer backwards.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al. and Manduley et al. as applied to claim 1 above, and further in view of Feinland et al. (US 5226496 A).

As per claim 7, Murata et al. disclose a method as claimed in claim 1.

Murata et al. fail to disclose evaluating said weight measurement of said postal item and identifying if said weight measurement is likely to be imprecise; and if said weight measurement is likely to be imprecise, switching into a further operating mode and conveying said postal item directly through said discharge region of said scale and assigning a weight value to said postal item in place of said weight measurement, said weight value being higher than said weight measurement which is likely to be imprecise.

Feinland et al. disclose evaluating said weight measurement of said postal item and identifying if said weight measurement is likely to be imprecise(Feinland et al., Abstract, Col. 6, Lines 1-30); and
if said weight measurement is likely to be imprecise, switching into a further operating mode and conveying said postal item directly through said discharge region of said scale and, said weight value being higher than said weight measurement which is likely to be imprecise(Feinland et al., Abstract, Col. 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use evaluating said weight measurement of said postal item and identifying if said weight measurement is likely to be imprecise; and if said weight measurement is likely to be imprecise, switching into a further operating mode and conveying said postal item directly through said discharge region of said scale, said weight value being higher than said weight measurement which is likely to be imprecise as taught by Feinland et al. to get the benefit of dealing effectively with imprecise weight measurements.

As per claim 7, official notice is taken that assigning a weight value to said postal item in place of said weight measurement is an old and well-known type of method of determining postage in the postal scale and weighing instrument art. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to assign a weight measurement to an article whose weight is unknown.

7. Claims 8, 9,10, 21, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al. (US 5230391 A), Manduley et al. (US 3890492 A) and Feinland et al. (US 5226496 A).

As per claim 8(Twice amended), Murata et al. disclose a dynamic scale(Murata et al., Abstract) comprising:

a conveyor arrangement for conveying postal items having a conveyor belt(Murata et al., Abstract) driven by a motor(Murata et al., Abstract);

a scale housing having an entry region for postal items and a discharge region for postal items(Manduley et al., Abstract, Fig 1a);

a weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67) connected to a weighing cell(Feinland et al., Abstract), said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67) being disposed between said entry region and said discharge region(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 6, Lines 1-30) and

said conveyor arrangement, in a dynamic operating mode(Murata et al., Abstract), conveying a postal item with continuous movement without a stoppage in succession through said entry region(Murata et al., Abstract), said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67) and said discharge region(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 6, Lines 1-30); and

a controller which operates said motor to move said belt at a predetermined, regulated conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20,Col. 3, Lines 15-67, Fig. 4) when a postal item enters said entry region(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 6, Lines 1-30),

said controller deactivating regulation of said conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20, Col. 3, Lines 20-35, Fig. 4) while said postal item is moving through said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67) during a measuring time span during which a weight measurement of said postal item is made, allowing said weight measurement to be made with said postal item moving at a speed other than said predetermined, regulated conveying speed, and, after said measuring time span, said controller re-activating regulation of said conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20, Col. 3, Lines 20-35, Fig. 4) to move said postal item on said belt through said discharge region(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 6, Lines 1-30).

Murata et al. fail to disclose entry region of the scale, a weighing pan, and a discharge region of the scale.

Manduley et al. disclose a scale housing(Manduley et al., Abstract, Fig 1a), entry region of the scale, a weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67), and a discharge region of the scale(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 6, Lines 1-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use a scale housing, entry region of the scale, a weighing pan, and a discharge region of the scale as taught by Manduley et al. to get the benefit of an appropriate location to receive, weight and discharge the article to be weighed.

Murata et al. fail to disclose weighing cell.

Feinland et al. disclose weighing cell(Feinland et al., Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use weighing cell as taught by Feinland et al. to get the benefit of using a load cell transducer to convey the weight signal.

As per claim 8, official notice is taken that on-the-fly weighing incorporating weight measurement to be made with said postal item moving at a speed other than said predetermined, regulated conveying speed, and, after said measuring time span, said controller(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20, Col. 3, Lines 20-35, Fig. 4) re-activating regulation of said conveying speed are an old and well-known type of technology in the postal scale and weighing instrument art. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement Murata et al.'s weigher-conveyor system to include speed control features to get the benefit of conveyor speed control to ensure high weighing accuracy given that Murata et al.'s invention does indicate the conveyor stops and starts, and this is a form of conveyor speed control.

As per claim 9, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 8 wherein said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67,Col. 7, Lines 50-67) has a center of gravity, and wherein said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67) is mechanically connected to said weighing cell(Feinland et al., Abstract) substantially at said center of gravity(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 9, Lines 1-20).

Murata et al. fail to disclose entry region of the scale, a weighing pan, and a discharge region of the scale.

Manduley et al. disclose entry region of the scale, a weighing pan that has a center of gravity (Manduley et al., Abstract, Col. 5, Lines 60-67,Col. 7, Lines 50-67,Col. 9, Lines 1-20), and a discharge region of the scale(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 6, Lines 1-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use entry region of the scale, a weighing pan that has a center of gravity, and a discharge region of the scale as taught by Manduley et al. to get the benefit of an appropriate location to receive, weight and discharge the article to be weighed.

Murata et al. fail to disclose weighing cell.

Feinland et al. disclose weighing cell(Feinland et al., Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use weighing cell as taught by Feinland et al. to get the benefit of using a load cell transducer to convey the weight signal.

As per claim 10, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 8 wherein said housing(Manduley et al., Abstract, Fig 1a) has a guide wall(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 20-67,Fig 1a) disposed below said conveyor belt(Murata et al., Abstract) , and wherein said housing(Manduley et al., Abstract, Fig 1a) comprises a support mechanism for supporting said conveyor belt(Murata et al., Abstract) above and close to said lower guide wall(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 20-67,Fig 1a), a and wherein said lower guide wall(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 20-67,Fig 1a) in said discharge region comprises an adapter for transferring a postal item from said discharge region(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 6, Lines 1-30) to a downstream apparatus(Murata et al., Abstract, Col. 2, Lines 40-67).

Murata et al. fail to disclose housing, guide wall, and discharge region.

Manduley et al. disclose housing, guide wall, and discharge region.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use housing, guide wall, and discharge region as taught by Manduley et al. to get the benefit of an appropriate location to receive, weigh and discharge the article to be weighed.

As per claims 21 and 22, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 8 wherein said housing(Manduley et al., Abstract,

Fig 1a) has a lower guide wall(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 20-67,Fig 1a) having a width substantially equal to a width of said conveyor belt(Murata et al., Abstract) and having a length which is less than a length of a conveying path for postal items formed by said conveyor belt(Murata et al., Abstract).

Murata et al. fail to disclose wherein said weighing pan has a back wall for guiding a postal item.

Manduley et al. disclose wherein said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67) has a back wall(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 20-67,Fig 1a) weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67) at an angle relative to said back wall(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 20-67,Fig 1a).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use said weighing pan and back wall as taught by Manduley et al. to get the benefit of a tray with a back wall to hold the mailing piece in position.

As per claim 26, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 8 further comprising a speed sensor mechanically connected to said motor and supplying a signal to said controller identifying a speed of said motor for use by said controller in regulating said conveying speed(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20, Col. 3, Lines 15-67, Fig. 4).

8. Claims 11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Murata et al., Manduley et al., and Feinland et al. as applied to

claim 8 above, and further in view of Kalm et al. (US 5901830 A).

As per claim 11, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 8 wherein said motor has a switchable direction of operation for moving said conveyor belt(Murata et al., Abstract) in a forward conveying direction and in a reverse conveying direction(Kalm et al., Abstract, Col. 4, Lines 1-25), and further comprising a driver connected between said controller(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20, Col. 3, Lines 20-35, Fig. 4) and said motor for switching said motor, dependent on a signal from said controller(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20, Col. 3, Lines 20-35, Fig. 4), to selectively move said conveyor belt(Murata et al., Abstract) in one of said first conveying direction and said second conveying direction(Kalm et al., Abstract, Col. 4, Lines 1-25).

Murata et al. fail to disclose first conveying direction and said second conveying direction.

Kalm et al. disclose first conveying direction and said second conveying direction(Kalm et al., Abstract, Col. 4, Lines 1-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use first conveying direction and said second conveying direction as taught by Kalm et al. to get the benefit of controlling conveyor belts' direction and speed.

As per claim 13, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 11 comprising a switchable transmission, and wherein said controller(Murata et al., Abstract, Col. 1, Lines 45-67, Col. 2, Lines 1-20, Col. 3, Lines 20-35, Fig. 4) switches said transmission(Kalm et al., Abstract, Col. 4, Lines 1-25) to operate said motor to move said conveyor belt(Murata et al., Abstract) in said reverse conveying direction(Kalm et al., Abstract, Col. 4, Lines 1-25).

Murata et al. fail to disclose switchable transmission and reverse conveying direction.

Kalm et al. disclose switchable transmission and reverse conveying direction(Kalm et al., Abstract, Col. 4, Lines 1-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use switchable transmission and reverse conveying direction as taught by Kalm et al. to get the benefit of controlling conveyor belts' direction and speed.

As per claim 14, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 8 comprising a support mechanism for said conveyor belt(Murata et al., Abstract) comprising two carrier plates and a supporting plate disposed between said two carrier plates, each of said carrying plates being connected to said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67), and a tensioning arrangement for setting a tension(Kalm et al., Abstract, Col. 4, Lines 25-60) of said conveyor belt(Murata et al., Abstract), said tensioning arrangement(Kalm et al., Abstract, Col. 4, Lines 25-60) being mounted to said carrier plates, and said conveyor belt(Murata et al., Abstract) being substantially non-elastic at least in a direction corresponding to a conveying direction of said postal item.

Murata et al. fail to disclose tensioning arrangement.

Kalm et al. disclose tensioning arrangement(Kalm et al., Abstract, Col. 4, Lines 25-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use tensioning arrangement as taught by Kalm et al. to get the benefit of controlling the tension of conveyor belt.

Murata et al. fail to disclose weighing pan.

Manduley et al. disclose weighing pan (Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use a weighing pan as taught by Manduley et al. to get the benefit of having a location within which to the article is weighed.

As per claim 15, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 14 wherein said tensioning arrangement comprises at least one adjustable tension spring for setting said tension(Kalm et al., Abstract, Col. 4, Lines 25-60).

Murata et al. fail to disclose least one adjustable tension spring for setting said tension.

Kalm et al. disclose least one adjustable tension spring for setting said tension (Kalm et al., Abstract, Col. 4, Lines 25-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use least one adjustable tension spring for setting said tension as taught by Kalm et al. to get the benefit of controlling the tension of the conveyor belt.

As per claim 16, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 15.

Murata et al. fail to disclose a tensioning arrangement comprises a tensioning roller around which said conveyor belt(Murata et al., Abstract) is entrained, said tensioning roller being mounted on a tensioning shaft, said tensioning shaft having opposite ends each receiving a guide pin, respective helical springs wound around each guide pin, two stop plates respectively attached to said carrier plates, each guide pin having a nut screwed thereon and said stop plate being disposed between said nut and said tensioning shaft with each helical

spring being compressed between one of said nuts and one of said stop plates, each helical spring being compressively pre-stressed.

Kalm et al. disclose a tensioning arrangement comprises a tensioning roller around which said conveyor belt is entrained, said tensioning roller being mounted on a tensioning shaft, said tensioning shaft having opposite ends each receiving a guide pin, respective helical springs wound around each guide pin, two stop plates respectively attached to said carrier plates, each guide pin having a nut screwed thereon and said stop plate being disposed between said nut and said tensioning shaft with each helical spring being compressed between one of said nuts and one of said stop plates, each helical spring being compressively pre-stressed(Kalm et al., Abstract, Cols.1-4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use a tensioning arrangement comprises a tensioning roller around which said conveyor belt is entrained, said tensioning roller being mounted on a tensioning shaft, said tensioning shaft having opposite ends each receiving a guide pin, respective helical springs wound around each guide pin, two stop plates respectively attached to said carrier plates, each guide pin having a nut screwed thereon and said stop plate being disposed between said nut and said tensioning shaft with each helical spring being compressed between one of said nuts and one of said stop plates, each helical spring being compressively pre-stressed as taught by Kalm et al. to get the benefit of controlling the tension of the conveyor belt.

As per claim 17, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 16.

Murata et al. fail to disclose guide pins are respectively received in said tensioning shaft so as not to rotate within said tensioning shaft, and further comprising, for each guide pin, a securing ring which prevents the guide pin from sliding out of said tensioning shaft.

Kalm et al. disclose guide pins are respectively received in said tensioning shaft so as not to rotate within said tensioning shaft, and further comprising, for each guide pin, a securing ring which prevents the guide pin from sliding out of said tensioning shaft(Kalm et al., Abstract, Cols.1-4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use guide pins are respectively received in said tensioning shaft so as not to rotate within said tensioning shaft, and further comprising, for each guide pin, a securing ring which prevents the guide pin from sliding out of said tensioning shaft as taught by Kalm et al. to get the benefit of controlling the tension of the conveyor belt.

As per claim 18, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 16.

Murata et al. fail to disclose wherein each of said carrier plates has an oblong hole therein, the respective oblong holes receiving said tensioning shaft and allowing said tensioning shaft to glide therein when said conveyor belt(Murata et al., Abstract) is tensioned by said tensioning roller.

Kalm et al. disclose wherein each of said carrier plates has an oblong hole therein, the respective oblong holes receiving said tensioning shaft and allowing said tensioning shaft to glide therein when said conveyor belt(Murata et al., Abstract) is tensioned by said tensioning roller(Kalm et al., Abstract, Cols.1-4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use said carrier plates has an oblong hole therein, the respective oblong holes receiving said tensioning shaft and allowing said tensioning shaft to glide therein when said conveyor belt is tensioned by said tensioning roller as taught by Kalm et al. to get the benefit of controlling the tension of the conveyor belt.

As per claim 19, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 8.

Murata et al. fail to disclose comprising a drive roller entrained by said conveyor belt and driven by said motor, said drive roller comprising a sandblasted aluminum pinion, and said conveyor belt being comprised of a low-stretch fabric having a glide coating facing said drive roller and allowing a predetermining slippage between said drive roller and said conveyor belt dependent on a belt tension of said conveyor belt.

Kalm et al. disclose comprising a drive roller entrained by said conveyor belt and driven by said motor, said drive roller comprising a sandblasted aluminum pinion, and said conveyor belt being comprised of a low-stretch fabric having a glide coating facing said drive roller and allowing a predetermining slippage between said drive roller(Kalm et al., Abstract, Cols.1-4) and said conveyor belt dependent on a belt tension of said conveyor belt.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use comprising a drive roller entrained by said conveyor belt and driven by said motor, said drive roller comprising a sandblasted aluminum pinion, and said conveyor belt being comprised of a low-stretch fabric having a glide coating facing said drive roller and allowing a predetermining slippage between said drive roller and said conveyor belt dependent on a belt tension of said conveyor belt as

taught by Kalm et al. to get the benefit of controlling the tension of the conveyor belt.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al., Manduley et al., Feinland et al. and Kalm et al. as applied to claim 11 above, and further in view of Cordery et al. (US 4903788 A).

As per claim 12, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 11 wherein said motor comprises a DC motor operated with a voltage having a polarity, and wherein said driver switches said polarity of said voltage to switch(Cordery et al., Abstract, Col. 3, Lines 1-20, Col. 6, Lines 12-60, Col. 9, Lines 1-40) said motor to move said conveyor belt(Murata et al., Abstract) in said reverse conveying direction(Kalm et al., Abstract, Col. 4, Lines 1-25).

Murata et al. fail to disclose first conveying direction and said second conveying direction.

Kalm et al. disclose first conveying direction and said second conveying direction(Kalm et al., Abstract, Col. 4, Lines 1-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use first conveying direction and said second conveying direction as taught by Kalm et al. to get the benefit of controlling conveyor belts' direction and speed.

Murata et al. fail to disclose motor comprises a DC motor operated with a voltage having a polarity, and wherein said driver switches said polarity of said voltage to switch.

Cordery et al. disclose motor comprises a DC motor operated with a voltage having a polarity, and wherein said driver switches said polarity of said voltage to switch(Cordery et al., Abstract, Col. 3, Lines 1-20, Col. 6, Lines 12-60, Col. 9, Lines 1-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use motor comprises a DC motor operated with a voltage having a polarity, and wherein said driver switches said polarity of said voltage to switch as taught by Cordery et al. to get the benefit of controlling conveyor belts' direction and speed.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al., Manduley et al. and Feinland et al. as applied to claim 19 above, and further in view of Braun et al. (US 3955666).

As per claim 20, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 19.

Murata et al. fail to disclose wherein said glide coating is comprised of plastic.

Braun et al. disclose glide coating is comprised of plastic Braun et al., Abstract, Col. 1, Lines 55-67, Col. 2, Lines 5-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use glide coating is comprised of plastic as taught by Braun et al. to get the benefit of a smooth surface.

11. Claims 23, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al., Manduley et al. and Feinland et al. as applied to claim 8 above, and further in view of Cordery et al. (US 4903788 A).

As per claims 23 and 24, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 8 wherein said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67) is mechanically connected to said weighing cell(Feinland et al., Abstract) substantially at a center of gravity of a combination of said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67) and a postal item, having highest permitted dimensions, when said postal item having highest permitted dimensions is disposed centrally on said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67).

Murata et al. fail to disclose said weighing pan is comprised of flexurally and torsionally stiff lightweight material and has a back wall.

Manduley et al. disclose weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 50-67) and a back wall(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 20-67,Fig 1a).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use said weighing pan and a back wall as taught by Manduley et al. to get the benefit of a a specific location to hold the object to be weighed.

Murata et al. fail to disclose a tray comprised of flexurally and torsionally stiff lightweight material.

Cordery et al. disclose a tray comprised of flexurally and torsionally stiff lightweight material (Cordery et al., Abstract, Col.3, Lines 1-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use a tray

comprised of flexurally and torsionally stiff lightweight material as taught by Cordery et al. to get the benefit of a tray flexible enough to hold the object to be weighed.

Feinland et al. disclose weighing cell(Feinland et al., Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use weighing cell as taught by Feinland et al. to get the benefit of using a load cell transducer to convey the weight signal.

As per claim 25, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 24.

Murata et al. fail to disclose wherein said back wall(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 20-67,Fig 1a) of said weighing pan is comprised of a one-piece sandwich structure.

Manduley et al. disclose wherein said back wall(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 20-67,Fig 1a) of said weighing pan(Manduley et al., Abstract, Col. 5, Lines 60-67, Col. 7, Lines 20-67) is comprised of a one-piece sandwich structure(Manduley et al., Abstract, Fig. 1a).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use said back wall of said weighing pan is comprised of a one-piece sandwich structure as taught by Manduley et al. to get the benefit of a walled in weighing structure.

12. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murata et al., Manduley et al., Feinland et al. as applied to claim 26 above, and further in view of Sakai et al. (US 5754361).

As per claim 27, Murata et al. disclose a dynamic scale(Murata et al., Abstract) as claimed in claim 26.

Murata et al. fails to disclose wherein said speed sensor comprises an encoder.

Sakai et al. disclose wherein said speed sensor comprises an encoder(Sakai et al., Abstract, Col. 8, Lines 60-67, Col. 9, Lines 1-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Murata et al. to use said speed sensor comprises an encoder as taught by Sakai et al. to get the benefit of controlling the speed of the conveyor belt.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Herrle, Harald L., Dynamic Weighing: A Look at What In-Motion Weighing is All About (Reports on Checkweighing), Canadian Packaging, v47, n3, p24(1), 1994.

Scribner, Postage Metering System Having Weight Checking Capability.

Fessler, Slab-Cutting Machine.

Eser et al., Method and Apparatus for Disinfecting or Sterilizing Infectious Waste.

Diver et al., Bread Accumulator.

Blattermann et al., Conveyor System.

Shibaki et al., Image Forming Apparatus for Detecting Full of File Buffer.

Yamada et al., Document Feeding Apparatus.

Raynes, Conveyor Weighing Scale.

Jacobs et al., Monitor for Moving Vehicles.

Yamanaka et al., Device for Weighing Running Vehicle.

Drautz, Joachim, Computer-controlled Allaround machine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra F. Charles whose telephone number is (703) 305-4718. The examiner can normally be reached on 9-5 Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John G. Weiss can be reached on (703) 308-2702. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Debra F. Charles
Examiner
Art Unit 3629

dfc
November 26, 2002

JOHN G. WEISS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600